## CLAIM SET AS AMENDED

(Currently Amended) An non-symmetric A non-symmetric drive type
piezoelectric ceramic transformer comprised of comprising:

a rectangular piezoelectric conductor, characterized in that

wherein said rectangular piezoelectric conductor is divided into three zones a first zone, a second zone, and a third zone along its length: the

the first zone; called as being an oscillation node adjustment zone, the length of which is adjustable, so as to adjust the so as to be able to adjust a resonance frequency and oscillation node of said piezoelectric transformer;

the second zone, called as being an input drive zone, the upper and lower surface of which is coated with an electrode respectively, and which is polarized along its thickness; and

the third zone, called as being an output generation zone, the output head of which is coated with an electrode and which is polarized along its length,

wherein a height (H) of the first, second, and third zones is substantially equal to 2.72 mm.

2. (Original) The non-symmetric drive type piezoelectric ceramic transformer according to claim 1, characterized in that there are wherein the piezoelectric ceramic transformer has three alternative oscillation modes, i.e., modes, including  $\lambda$ 2,  $\lambda$ , 3  $\lambda$ 2, of which oscillation mode  $\lambda$ 2 has preferred output power and boosting ratio, when operating

Application No. 10/542,440 Amendment dated April 24, 2007

Reply to Office Action of January 24, 2007

Docket No.3410-0107PUS1 Art Unit:2834 Page 4 of 11

under oscillation mode  $\lambda/2$ , the null displacement oscillation nodes are located at the center of the transformer, the oscillating displacement of output head is greater than that of input

head, and the oscillating displacement diagram belongs to an non-symmetric type diagram.

3. (Original) The non-symmetric drive type piezoelectric ceramic transformer

according to claim 1, characterized in that wherein said piezoelectric conductor is of single-

layer.

4. (Currently Amended) The non-symmetric drive type piezoelectric ceramic

transformer according to claim 1, characterized in that wherein said piezoelectric conductor

is composed of several simple-layer piezoelectric conductor which are added together and

passing through monolithic process so as to form a multi-layer transformer.

5. (Currently Amended) The non-symmetric drive type piezoelectric ceramic

transformer according to claim 3, characterized in that the wherein a polarization direction of

said input drive zone is from top to bottom or from bottom to top.

6. (Currently Amended) The non-symmetric drive type piezoelectric ceramic

transformer according to claim 3, eharacterized in that the wherein a polarization direction of

said output generation zones is right or left along its length.

7. (Currently Amended) The non-symmetric drive type piezoelectric ceramic

transformer according to claim 4, characterized in that the wherein a polarization direction of

said input drive zone is from top to bottom or from bottom to top.

Application No. 10/542,440
Amendment dated April 24, 2007

Reply to Office Action of January 24, 2007

Docket No.3410-0107PUS1 Art Unit:2834 Page 5 of 11

8. (Currently Amended) The non-symmetric drive type piezoelectric ceramic

transformer according to claim 4, characterized in that the wherein a polarization direction of

said output generation zones is right or left along its length.

9. (Currently Amended) The non-symmetric drive type piezoelectric ceramic

transformer according to claim 5, characterized in that wherein the polarization direction of

said output generation zones is right or left along its length.

10. (New) The non-symmetric drive type piezoelectric ceramic transformer according

to claim 1, wherein when the piezoelectric ceramic transformer operates under oscillation

mode N2, null displacement oscillation nodes are located at a center of the transformer, an

oscillating displacement of output head is greater than that of an input head, and an

oscillating displacement diagram belongs to a non-symmetric type diagram.

11. (New) The non-symmetric drive type piezoelectric ceramic transformer according

to claim 1, wherein lengths and widths of the electrodes on the upper and lower surfaces of

the second zone are substantially equal to 12.0 mm and 6.00 mm, respectively.

12. (New) A non-symmetric drive piezoelectric ceramic transformer comprising:

a rectangular piezoelectric conductor,

wherein said rectangular piezoelectric conductor is divided into a first zone, a second

zone, and a third zone along its length,

the first zone being an oscillation node adjustment zone, the length of which is adjustable, so as to so as to be able to adjust a resonance frequency and oscillation node of said piezoelectric transformer;

the second zone being an input drive zone, the upper and lower surface of which is coated with an electrode respectively, and which is polarized along its thickness; and

the third zone being an output generation zone, the output head of which is coated with an electrode and which is polarized along its length,

wherein a height (H) of the first, second, and third zones is substantially equal to 2.72 mm, and a width (W) of the first, second, and third zones is substantially equal to 6.0 mm.

13. (New) The non-symmetric drive type piezoelectric ceramic transformer according to claim 12, wherein lengths and widths of the electrodes on the upper and lower surfaces of the second zone are substantially equal to 12.0 mm and 6.00 mm, respectively.